

## **REMARKS**

Claims 1, 12, 14, 15, 17, 22, 23 and 27 are amended. Claims 1-9, 11-32 and 62-68 remain in the application.

Claims 5-7, 9, 25 and 26 are objected to, but would be allowable if rewritten in independent form. Regarding claim 5, such claim is amended to include the limitations of independent claim 1 from which claim 5 depended, and therefore, as amended, is allowable. Claims 6-7 depend from newly written independent claim 5, and therefore, are also allowable. Regarding claim 9, such claim is amended to include the limitations of independent claim 1 from which claim 9 depended, and therefore, as amended, is allowable. Regarding claim 25, such claim is amended to include the limitations of independent claim 22 from which claim 25 depended, and therefore, as amended, is allowable. Claim 26 depends from newly written independent claim 25, and therefore, is also allowable.

Claims 13, 16 and 19-21 are allowed. Moreover, claim 18 is allowed as no objections or rejections are presented against such claim.

Claims 12, 14, 15, 17, 23, 27, and 32 are objected to for informalities. Such claims, except for claim 32, are amended as requested by the Examiner, and therefore, the objection against such claims should be withdrawn. Regarding claim 32, the language referred to by the Examiner does not exist in the claim as such claim was previously amended in the response mailed February 6, 2003. Accordingly, the objection to claim 32 is inappropriate and should be withdrawn.

Regarding the §112, second paragraph, rejection against claims 5-7, 9, 24 and 65-68, the Examiner states Applicant fails to distinctly claim subject matter to the disclosed invention reasoning that the claim recitation to a masking layer having an opening disposed therein atop a silicon nitride layer is unclear because the specification discloses a photoresist layer having an opening disposed on the top the of a silicon nitride layer (pg. 3 of paper no. 16). The Examiner is respectfully reminded that MPEP §2173.02 (8th Edition) states, pertaining to a §112, second paragraph requirement, the “[d]efiniteness of claim language must be analyzed, **not in a vacuum**, but in light of ... the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made” (emphasis added). Contrary to this authority, the Examiner is analyzing the claims in a vacuum without considering what interpretation one skilled in the art would give the claims. One skilled in the semiconductor arts understands that a photoresist layer is routinely provided as a masking layer, and therefore, a recitation to a “masking layer” is definite under §112, second paragraph. Evidence of such understanding by one skilled in the art is demonstrated by the art of record, for example, U.S. patent no. 6,383,931 to Flanner et al., which teaches how a photoresist layer is processed to form a masking layer (col. 2, Ins. 15-25; col. 3, Ins. 40-50). Accordingly, one skilled in the art understands that claim recitation to masking layer is definite by a disclosure to a photoresist. Consequently, pursuant to the above authority, the

§112, second paragraph, rejection against claims 5-7, 9, 24 and 65-68 is inappropriate and should be withdrawn.

Since no additional rejections are presented against claims 5-7, 9, 24 and 65-68, Applicant requests allowance of such claims in the next office action.

Regarding the anticipation rejection against claim 1 based on Sakai, such claim is amended to recite forming a first isolation trench portion with a first gas mixture and forming a second isolation trench portion with a second gas mixture **different** from the first gas mixture. Such amendment language is supported by the originally-filed application at, for example, pages 10-11. Sakai is devoid of teachings to gas mixtures for forming trench portions (see, for example, trench 11a of trench 11 at col. 9; Ins. 55-60). Accordingly, it is inconceivable that Sakai could teach or suggest forming a second isolation trench portion with a second gas mixture **different** from a first gas mixture as recited in claim 1. Consequently, Sakai, singularly or in any combination with the art of record, fails to teach or suggest a positively recited limitation of claim 1, and therefore, claim 1 is allowable.

Claims 2-9 and 11-12 depend from independent claim 1, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not shown or taught by the art of record.

Regarding the obviousness rejection against claim 22 based on Noguchi and Sakai, such claim is amended to recite a second isolation trench portion

having a bottom portion of silicon at a second depth and doping the bottom portion of the second isolation trench portion. Such amendment language is supported by the originally-filed application at, for example, page 11. Noguchi and Sakai are devoid of any teaching or suggestion to doping the bottom portion of a second isolation trench portion as recited in claim 22. Accordingly, Noguchi and Sakai fail to teach or suggest, in any combination with the art of record, a positively recited limitation of claim 22. Claim 22 is allowable.

Claims 23-32 and 62-64 depend from independent claim 22, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not shown or taught by the art of record.


Further, Applicant herewith submits a duplicate copy of the Information Disclosure Statement and Form PTO-1449 filed together with this application on August 31, 2000 and the Supplemental Information Disclosure Statement and Form PTO-1449 filed on March 10, 2003. No initialed copy of the PTO-1449s have been received back from the Examiner. To the extent that the submitted references listed on the Form PTO-1449s have not already been considered, and the Form PTO-1449s have not been initialed with a copy being returned to Applicant, such examination and initialing is requested at this time, as well as return of a copy of the initialed Form PTO-1449s to the undersigned.

This application is now believed to be in immediate condition for allowance, and action to that end is respectfully requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the

undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

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